



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,357	08/19/2003	Kazumasa Watanabe	KIN88USA	4854
270	7590	04/04/2006		EXAMINER
HOWSON AND HOWSON SUITE 210 501 OFFICE CENTER DRIVE FT WASHINGTON, PA 19034				HUG, ERIC J
			ART UNIT	PAPER NUMBER
			1731	

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/643,357	WATANABE, KAZUMASA	
	<b>Examiner</b>	<b>Art Unit</b>	
	Eric Hug	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

1) Responsive to communication(s) filed on 19 August 2003.  
 2a) This action is **FINAL**.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

4) Claim(s) 1-18 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-16 is/are rejected.  
 7) Claim(s) 17 and 18 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 19 August 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 3, 5, 7, 9, 11, 13, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Fagerholm et al (US 5,965,208).

Fagerholm discloses a coater belt for carrying and supporting a web through a coating station on a paper or board machine, wherein belt comprises an endless base member and at least a surface layer. The surface layer is an impermeable coating comprising a polymeric material and a particulate filler material. The filler material provides a well-defined roughness on micro-scale of the web-contact surface. The same or similar coating can be applied to the back side surface of the belt. See Figure 4, column 6, lines 20-27, and column 7, lines 11-19. Suitable fillers include kaolin clay. The filler particle size may be between 1-100 microns. The example provides kaolin in an amount of 16.4% by weight. See column 6, lines 54-65 and Table 1. Although the belt of Fagerholm is not used in a shoe press, the construction of the belt is identical to the claimed belt.

2. Claims 1 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Sakuma et al (US 6,530,854). The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Sakuma discloses a shoe press belt for papermaking composed of heat-resistant base and resin layers, the resin layer containing a filler for either increasing or decreasing its thermal conductivity. The resin layer may be composed of sublayers, some having filler or free of filler depending on the desired characteristics of the belt. The sublayers may have fillers with different thermal conductivities, proceeding progressively from low to high or from high to low. One of the filler materials is alumina powder. See Figure 5 and Example 3. In Example 3, alumina is used to provide high conductivity in the outer layer. Since the progression of conductivity may be reversed, the use of alumina in the shoe contacting surface is encompassed by the teachings of Sakuma. The claimed features of projections and recesses are inherent resulting from the mixing of filler with resin.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2-8 and 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakuma et al (US 6,530,854).

Sakuma discloses the shoe press belt described above which may include alumina powder filler in one of the resin layers. The claimed surface roughness, particle size, and content of powder are not expressly disclosed by Sakuma. It would have been obvious to one skilled in the art to utilize the filler in an amount of 5-50% by weight of resin in order to provide at least a significant change in the conductivity of a resin layer compared to a layer without filler. It would have also been obvious to use less than 50% filler so as not to significantly alter the other physical properties of the resin layer required for operating on a shoe press (e.g., elasticity, resistance to cracking, etc.). It would also be obvious that the particle size of the alumina falls within the claimed range of 5-500 microns, and that a surface roughness of 50-500 microns would result from the inclusion of alumina in the resin material.

4. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klerelid et al (US 6,547,924) in view of Eklund et al (US 5,298,124). Klerelid qualifies as prior art under 35 U.S.C. 102(e).

Klerelid discloses a paper machine with a shoe press, through which an impermeable texturing belt and a felt run with a fibrous web between them. The texturing belt can be made in accordance with the teachings of Eklund. See column 9, lines 43-64. Eklund discloses a transfer belt which has a web-contacting surface which is substantially impermeable to water and air and has a pressure-responsive microscale topography.

One embodiment of the belt of Klerelid comprises a polymeric back side layer 33 and a polymeric web-contacting layer 34 having a roughness of 2-80 microns (column 8, lines 34-55). When made according to Eklund, the belt comprises a polymer composition such as acrylic polymer resin, polyurethane polymer resin, or polyurethane/polycarbonate resin. The carrier 33 may be coated on the rear side with a polymer material of the same type as that used for the web-contacting layer 34. The polymer also contains particles of a filler, which have a different hardness from the polymer material and may consist of kaolin, clay, polymer material, or metal. The carrier constituting the back layer 33 also includes any type of base element that can be made endless.

Suitable fillers are disclosed in more detail by Eklund in columns 14-15, and include those described above. The amounts used clearly fall within the claimed range of 5-50% and also the particle size falls within the claimed range of 5-500 microns. The resulting surface has a roughness of 2-80 microns.

***Allowable Subject Matter***

Claims 17 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

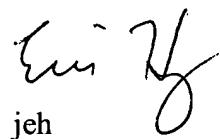
The claims are allowable for providing the powdery material as either a lipophilic inorganic compound, an oil-absorbing resin, or a lipophilic resin.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 571 272-1192.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Eric Hug

jeh